

# SECTION THREE

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## IIM - Basic Level Sample Research Study Using the Independent IIM Process

**T**his sample IIM research study has been developed to help you understand the use of the *IIM Unit Plan* and the Student Workpages at the Basic Level. This dinosaur unit models a third grade class study. The student work reflects the skills of a typical third grade student.

The unit plan includes academic and study skills objectives based on state standards. There are “How to” skills that need to be taught as well as assessment strategies that relate directly to the objectives. The list of teacher resources are representative of what might be available in most schools and contains books and videos you could use. Allison’s resources are our creation.

For this model student booklet, the teacher has chosen the sample pages referenced in the Teacher/Student steps in Section One. There are additional pages in Section Two you might choose if you are working with students in higher grades or those experienced in IIM who are ready for more advanced skills. These include developing and defending a thesis statement, asking questions based on Bloom’s Taxonomy, and writing notefacts by category. You will also find an alternative cover page and notefact pages with narrower line spacing. (See page references under Teacher Tips for each step.)



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# Objectives, Skills, & Standards

## IIM Unit Plan

Curriculum Unit: Dinosaurs

Class: Grade 3 Ted Rex

Dates: March 1-26

Time: Lang. Arts/Science/Art/  
Library class periods

### Academic and Study Skills Objectives:

*Students will:*

Learn the 7 steps of Independent IIM

Learn specific information about dinosaurs, adaptations, habitats, and  
inherited characteristics

Take notefacts without plagiarizing

Take notefacts from a video

Learn key vocabulary words related to topic chosen

Present big book to Grade 1 classes

### Teacher Goal Setting Questions:

What was its habitat?

What were its physical adaptations to its habitat?

Describe the parents and their babies?

### “How To” Skills:

*Teach students “How to”:*

Complete each of 7 steps (using Triceratops as my model)

Gather relevant information from video

Lay out book page - title, illustration, text. Use stencil letters

Use appropriate voice tone and rate of speech with microphone when presenting to Grade 1

Use big book page to clarify message

### Standards Addressed:

Identify organisms that once lived and that have disappeared (MA, Sci., Strand 2)

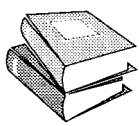
Explain how structures are related to the survival of that organism (NH, Life Sci., Std. 3)

Organize and convey information effectively in written reports (VT, Comm., 1.8)

Speak appropriately to different audiences for different purposes and occasions (TX, Eng., 3.3)

Generate questions/conduct research using information from many sources (TX, Eng., 3.12A-J)

Develop an extensive vocabulary (TX, Eng., 3.8 A-D)



# Resources

## IIM Unit Plan

Curriculum Unit: Dinosaurs

List the resources you will use during the unit. Be sure to include some that are appropriate for the diverse learning needs and styles within your classroom.

**Print:** (book, computer, poster...)

Norman, David and Angela Milner. Dinosaur. New York: Alfred A. Knopf, 1989.

Poster set

My collection of dinosaur books, posters, fact cards

**Non-Print:** (field trip, video, experiment...)

Fossils: Windows into the Past. Videocassette, Rainbow Educational Media, 1999

Acton Discovery Museum, Acton, MA

My dinosaur models

**People:** (speaker, parent volunteer, other teacher...)

Ms. Barbara Brush - art teacher - big book page layout and design

Dr. James Jurassic - science professor - Astute Academy

Ms. Paige - librarian - introduce non-book resources, research time

Ms. Trish Triassic - Title I tutor - Steps 3 - 6

Mr. Ron Raptor - enrichment specialist - book cover and binding with arts cluster group,  
paleontology extension studies with g/t students

Parent volunteers - field trip, Steps 3 & 4

**Preparatory Activities/Materials:**

**Student Booklet Pages:** Sec. 2: p. 17, 18, 19,  
22, 23, 29, 30, 31, 32, 40, 41, 42, 44, 45, 47

**Transparencies:** All student booklet pages to  
use for model lessons

**Other:** Set presentation date/time with

Grade 1 teachers

Fill in my information before copying

**Immersion Activities:** Trip to Acton

Discovery Museum, Interest Center



# Assessment IIM Unit Plan

Curriculum Unit: Dinosaurs

What *process skills* will you assess?

Vocabulary development

Quantity and quality of notefacts

The relationship of goal setting questions  
to research information

Presentation skills

7 Steps of research

What *products* will you assess?

Authenticity of illustration and page  
layout in big book page

How?

Use of 5 key vocabulary words in  
writing sample

Rubric (Sec. 7: p. 22)

Grade *Evaluating Research Goals* (Sec. 2: p. 42)

1st grade teachers complete rubric (Sec. 7: p. 19)  
for voice tone, rate of speech, presentation  
of big book page

Informal assessment using daily  
journal entries

How?

Class rubric (Sec. 7: p. 23)

# 7 Steps IIM Unit Plan

Curriculum Unit: Dinosaurs

List what you will do for each step of the process. Include unit activities, assessment strategies, and skills lessons. Identify ways you will differentiate for the diverse learning needs and styles of your students

## Step 1 Topic

With class, develop two chart webs: Dinosaur Facts and Dinosaur Fiction

Class visits Acton Discovery Museum dinosaur exhibit

With class, list possible research topics and have students choose their own

Mr.Raptor, enrichment teacher, works 2x /week with advanced reading group on topic choice in paleontology; differentiates each step of process

Students make individual web for own topic referring to class dinosaur fact and fiction webs

## Step 2 Goal Setting

Work with class on asking good questions (skills lesson)

Students set personal notefact goal and write goal setting questions

## Step 3 Research

Give after school training to parents who will help in class

3 parents help with each research session

Introduce paraphrasing from text (skills lesson)

Teach use of Notefacts pages

Ms. Paige, librarian, introduces non-book resources



# 7 Steps IIM Unit Plan

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## STEP 4 Organizing

Play category game “Bird, Beast, or Fish”

Introduce *Steps to Organizing*

2 parents help with each organizing session

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## STEP 5 Goal Evaluation

Students complete Sec. 2: p. 42

Students choose information that will be presented in text and illustration of big book page

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## STEP 6 Product

With class, develop quality standards chart for book page (skills lesson)

Ms. Brush, art teacher, instructs students on how to lay out a book page and in use of stencil letters (skills lesson)

Check for accuracy of facts and authenticity of illustration on *My Product* page

Mr. Raptor works with arts cluster students on cover and binding of book

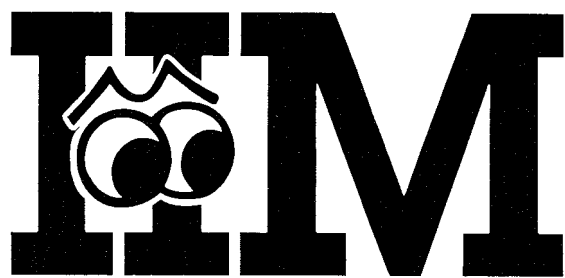
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## STEP 7 Presentation

Students practice reading orally with microphone and displaying book to classmates (skills lesson)

Students read pages of big book to Grade 1 classes in auditorium

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# Independent Investigation Method



Hi! I'm Agent



Agent

Name: Allison

Saurus

STUDENT BOOKLET

Basic Level



**By:** Allison Saurus

**Grade:** 3

**Teacher:** Mr. Ted Rex



**Class IIM Unit**

Dinosaurs

**My IIM Topic**

Pteranodon

**Date Started:** March 1

**Date Finished:** March 26





# STEPS to follow in



Agent

**1.** **Topic**  
Due: March 3

**2.**

**Goal Setting**  
Due: March 5

**3.**

**Research**  
Due: March 12

**5.**

**Goal  
Evaluation**  
Due: March 18

**6.**

**Product**  
Due: March 24

**7.**

**Presentation**  
Due: March 26

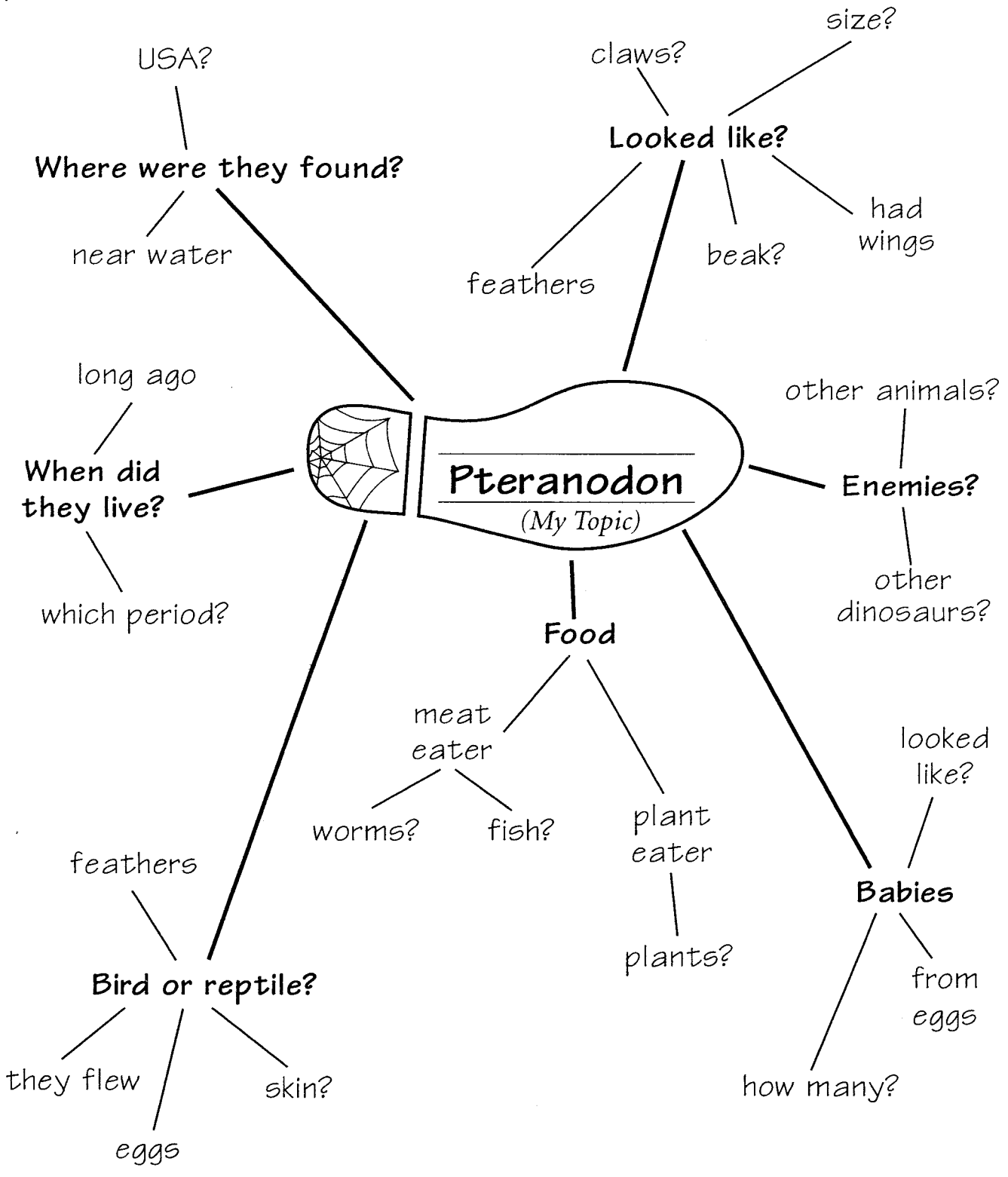
**4.**

**Organization**  
Due: March 16



# Concept Map

Web ideas about your *Topic* on the *Concept Map* using what you already know and what you want to learn.





# Setting Research Goals

Class Notefact Goal: 30

My Notefact Goal: 35

Required Number of Resources: 3

Required Glossary Entries: 5

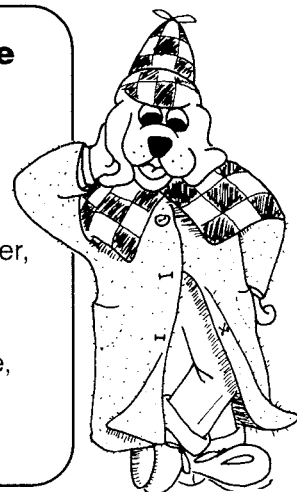
Resource Type Requirements: Video

Book

Computer

## Resource Types

Book,  
magazine,  
film strip,  
TV show, letter,  
computer,  
interview,  
video/movie,  
poster,  
field trip...



## Questions to Guide My Research

Teacher Questions:

What was its habitat?

What were its physical adaptations to its habitat?

Describe the parents and their babies.

My Questions:

What were its enemies?

What did it eat?

Where have they found fossils?

When did it live?

Was it a bird?



## Glossary of the Study

List the NEW words and their meanings that are key to the understanding of your topic.

omnivore

animal that feeds on  
plants and other animals

Pterosaur

Greek for winged reptile; family of  
reptiles that lived from late Triassic  
to end of Cretaceous period

crest

tuft of feathers or bony bump on  
head of an animal, especially a bird

extinct

no longer existing

adaptation

Changes an animal makes to help it  
survive in its environment

reptile

coldblooded animal with backbone  
that crawls or moves on short legs,  
usually hatches from an egg



# Notefacts

Source #



When Dinosaurs Ruled the Earth.

Dir. Stephen Stego.

Videocassette.

Century Fox, 1995.



Pteranodon – furry body, size of turkey



soared over water hunting fish



ate fish



males larger than females



excellent glider



spindly hind legs





toothless



good eyesight



couldn't smell well



lived in colonies



used crest for rudder



bones found in USA (Kansas)



not good walker on land





# Notefacts

Source #

2

Jurassic, James. PrehistoricCreatures. Exeter: Seaside

Publishing, 1996.



Lived in Jurassic &amp; Cretaceous periods



Jurassic period—

200,000,000 to 136,000,000 years ago



Cretaceous period—

136,000,000 to 65,000,000 years ago



Cretaceous ones flew better than Jurassics



flying reptile



skin covered with thin hair





# Notefacts

Source #



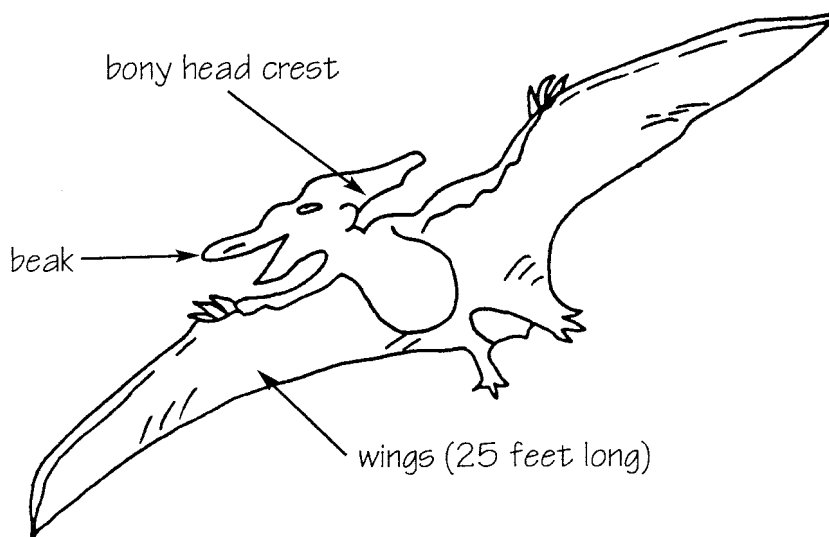
Cretaceous, Carla. "Flying

Reptiles." The Dinosaur Digest.

31 July 1999: 42-44.



## Labeled Diagram



bony head crest



claws on fingers and toes



lived by seaside cliffs







Name(s): Allison Saurus

Topic: Pteranodon

Date: March 15

Create with class of assign criteria and indicators for quality work. If you decide to give a grade, use the total possible points to decide on a range for letter grades.

### 1. Criterion: Quantity of Notefacts

Indicators: At least 30 notefacts

1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ ④

### 2. Criterion: Quality of Notefacts

Indicators: Not copied, enough information, short, related to goal setting questions.

1 \_\_\_\_\_ 2 \_\_\_\_\_ ③ \_\_\_\_\_ 4

### 3. Criterion: Number of resources

Indicators: At least 3

1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ ④

### 4. Criterion: Types of resources

Indicators: At least 3

1 \_\_\_\_\_ ② \_\_\_\_\_ 3 \_\_\_\_\_ 4

### Grading

**A** = 15 - 16

**D** = 9 - 10

**B** = 13 - 14

**Not Yet** = Less than 9

**C** = 11 - 12

**Final Grade** = B

### Ratings

**1** = Just Beginning

**3** = Made It

**2** = Moving Up

**4** = Over the Top





# Steps to Organizing

1. Think about categories as you read **all** your notefacts.
2. List categories at the bottom of this page.
3. Color the **handle** of each category lens a different color.
4. Write categories on *Organizing Notefacts* pages.

## Notes About

(Your category name)



Your  
category  
color

5. Color code all your notefacts according to category colors. (Color handle only.)
6. Cut notefact strips.
7. Place color-coded notefact strips on each *Organizing Notefacts* page.
8. Check with your teacher.
9. Glue strips to pages.

## Categories

food



when it lived



habitat



enemies



what it looked like



relatives





# Organizing Notefacts

Notes About \_\_\_\_\_ what it looked like

Pteranodon—furry body, size of turkey



toothless



bony head crest



claws on fingers and toes



Attach your notes

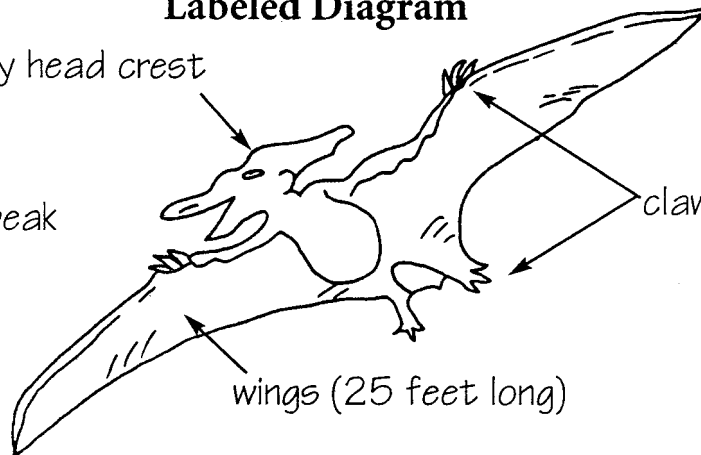
## Labeled Diagram

bony head crest

beak

claws

wings (25 feet long)





Evaluating Research Goals *What I Learned*

My Notefact Goal: 35

Notefacts Written: 37

Required Number of Resources: 3

Number of Resources Used: 4

Required Number of Glossary Entries: 5

Number of Glossary Entries: 6

Required Resource Types: Video Book Computer

Goal Achieved (check):

☒
☒
☐
☐

What I Learned About My Questions

Goal Setting Question: What did it eat?

Facts: fish, stored food in throat pouch, lake snails, worms,

shrimplike shell fish, sand fleas, red algae

Goal Setting Question: What were its physical adaptations to habitat?

Facts: throat pouch, wings, beak, claws, head crest for

rudder, spindly legs

Question (New or Goal Setting): How did it move?

Facts: excellent glider, soared over

water hunting fish, not good walker,

crest used as rudder

My Future IIM Goals: I will use the

computer and more resources.

I will finish my research earlier so

I can spend more time on my

product.

Possible Goals

Number of note-facts, notefact quality, number of resources, resource types, goal setting questions, time management...





# Choosing a Product

Choose a product that shows what you've learned during IIM. Choose something:

- *that you enjoy*
- *that will be interesting to others*
- *that is different from other products you've made*

**Action:** commercial, competition, dance, debate, demonstration, experiment, game, interview, lesson, play, puppet show, scavenger hunt, speech, treasure hunt...

**Collection:** collage, display, learning center, mini-museum, portfolio, scrapbook, terrarium...

**Model:** diorama, invention, musical instrument, scale model, sculpture...

**Technology:** animation, computer program, database, film strip, overhead projection, photograph, radio program, slide/sound program, tape recording, TV program, video tape, web page...

**Visual Representation:** bulletin board, cartoon, chart, concept map, costume, display board, family tree, flag, float, graph, map, mask, mobile, mural, needlework, painting, picture book, poster, project cube, puzzle, time line...

**Written Work:** advertisement, book (ABC, biography, fact, fantasy, flip book, journal, recipe book, science fiction, shape book), brochure, crossword puzzle, dictionary, fact cards, letter, magazine, news report, poetry, riddle, travel log, word search...

*page for class big book*

## Remember!

- Be sure your product shares what you've learned during your research
- Plan carefully
- Leave enough time to make a quality product
- Proofread your work



Change any of the suggestions, or come up with your own ideas.



# My Product

**Product:** Big book page — Pteranodon

List the steps you will follow in making your product:

1. Write sentences with facts

4. Draw pictures

2. Measure & layout page

5. Write sentences

3. Stencil in title

6. Proofread, then color

List the materials you will need:

cardboard

stencil letters

ruler

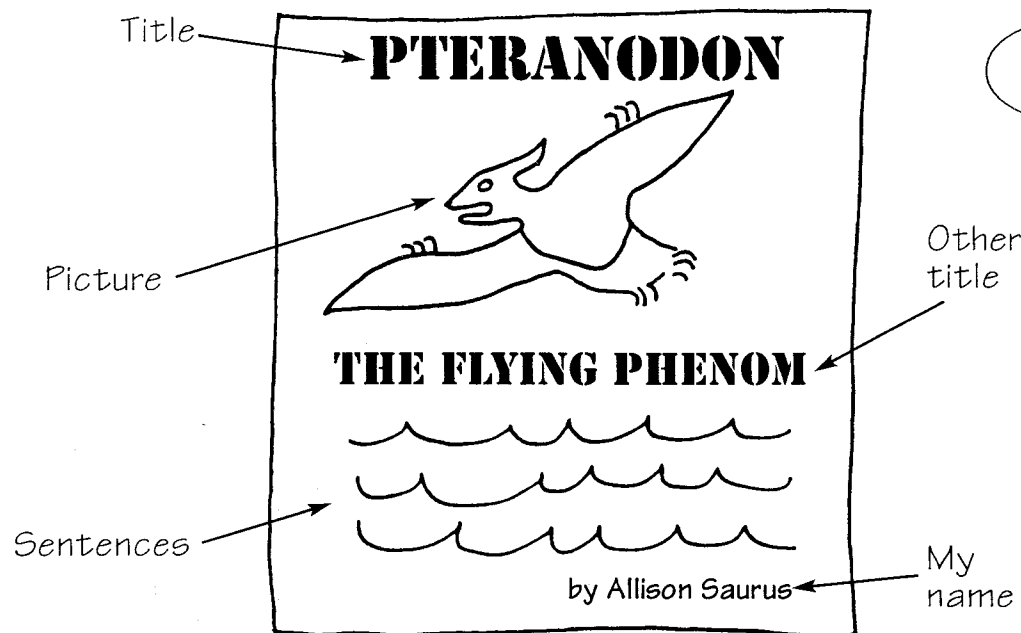
picture of Pteranodon

markers

What problem(s) might keep you from completing your product?

Rehearsals for my dance recital might take too much time.

Use this space (or the back of the page) to draw a diagram of your product.



Be sure to label your diagram!





# Assessment

## IIM Rubric: *(Step or Skill)*



BIG BOOK PAGE

Name: Allison Saurus

Topic: Pteranodon

List criteria and indicators for each rating number. This may be done by you or with your class.

### Criterion: Illustration - realistic

1	2	3	4
Little/no relationship to topic	Some use of color Accurate details	Effective use of color and details	Use of background details to enhance knowledge

### Criterion: Writing mechanics - grammar, spelling, punctuation

1	2	3	4
5+ errors	3 - 4 errors	1 - 2 errors	No errors

### Criterion: Research findings - facts on page

1	2	3	4
0 - 2	3 - 5	6 - 8	9 +

### Criterion: Page layout - design elements

1	2	3	4
Random design	Some design plan	Effective use of measurement, spacing, text, and illustrations	Creative design enhances understanding

Action...Technology...  
Collection...Visual  
Representation...Model...  
Written Work...

[illegible]





# My Presentation

**Product:** Big book page

**Method of Presentation:** *(Describe and list steps)*

I will put my big book page on the  
easel. I will face the class and tell  
them what I studied (notecard). Then  
I'll point to page with pointer while I read  
the words.



## Materials I Will Need:



Notecards



Handout—attach copy



Visual Aids—list:



Equipment—list:

Big book page

pointer, microphone

easel

## Last Chance Check!



1. Practice your presentation.
2. Evaluate both your product and presentation.
3. Circle what you have done well.
4. Improve those things that aren't circled.

## My Product:

Teaches something I've learned

Uses correct spelling and grammar

Is a creative way to share information

## My Presentation:

Teaches something I've learned

Is clear and well organized

Uses quality speaking voice— slow,  
clear, and loud

Is interesting to audience



# Assessment

## IIM Rubric: *(Step or Skill)*



### PRESENTATION

Name(s): Allison Saurus

Topic: Pteranodon

Date: March 26

Name of Peer Evaluator: Sarah Tops

Create with class or assign criteria for quality work. If you decide to give a grade, use the total possible points to decide on a range for letter grades.

CRITERIA	STUDENT OR <u>PEER</u>	TEACHER	COMMENT
Shows knowledge of topic	4	3	I counted 10 facts
Organized	3	2	Practice holding cards
			and microphone
Interesting	4	3	
Quality visuals	3	3	
Uses imagination & creativity	4	4	Great costume!
Good voice tone	4	3	Be sure to look at the
			audience
Makes eye contact	2	2	
<b>TOTAL</b>	<b>24</b>	<b>20</b>	<b>= 44</b>

### Grading

**A** = 50 - 56

**D** = 30 - 36

**B** = 44 - 49

**Not**

**C** = 37 - 43

**Yet** = Below 30

**Final Grade** = B

### Ratings

**1** = Just Beginning

**3** = Made It

**2** = Moving Up

**4** = Over the Top

